ERRORS OF VISION AS A FACTOR IN MOTOR CAR ACCIDENTS.

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An ideal driver of motor cars must be an excellent judge of pace and distance, keenly on the alert to seize every opportunity, and ready to act quickly on any emergency. All these qualities call for perfect and binocular vision, and must of necessity cause considerable eye and nerve strain even by day. How much more so, then, when daylight becomes uncertain, or fails altogether.

In looking back through accounts of motor accidents, one cannot fail to be struck by the number in which no explanation can be given of the initial cause except that "somebody blundered." We have a right to know "the reason why," so that in the future precautions can be taken to prevent their occurrence.

My attention was first seriously called to this subject by the following cases, which, to me, appear to point out a very simple and easily rectified cause—namely, errors of vision; and I certainly think that all would-be motor drivers ought to produce satisfactory evidence of good vision before being granted licences.

CASE I.

A healthy-looking man, 39 years old, came to consult me about his eyesight. He gave the following history:

A fortnight previously he had competed in a long-distance, non-stop race. As dusk was coming on he suddenly misjudged his distance from a turn in the road, whilst travelling at a moderately high speed, overshot his mark, and would have crashed into the trunk of a tree, possibly with fatal results, but for the sudden and vigorous application of his brakes. From that time he found it impossible to drive safely at more than lowest speed, and finally had been obliged to give up driving altogether. He had also noticed increasing difficulty in reading moderately-sized print. Previous to the accident he had had no idea of anything the matter with his vision, near or distant.

His vision was $\frac{6}{12}$ in each eye; $\frac{6}{5}$ with + 3 D.

What had happened was that his accommodation had gone and disclosed his hypermetropia, which he had previously been able to overcome.

CASE II.

A young man, 22 years of age, had noticed nothing the matter with his eyesight until three days previously, whilst driving a motor cycle. After a long ride, and hurrying home to escape being run in for riding without a light, suddenly everything seemed to go flat (his own words), and he found himself over a hedge instead of round the corner he was trying to turn. He had noticed himself seeing double occasionally since that time.

His vision was—Right $\frac{6}{5}$, left $\frac{6}{5}$ 2 L.; right eye normal, left + 0.5 cyl. vert., together with a latent divergence.

What had happened was that, owing to eye and nervous strain, the divergence became real, and he got monocular vision, or diplopia.

CASE III.

A young man, 23 years of age, came to consult me, complaining of frontal headache and pain in the eyes when driving his motor, together with difficulty in steering correctly. He was undoubtedly suffering from spasm of accommodation.

His vision was $\frac{6}{24}$ in each eye, - 1.0 sph. = $\frac{6}{5}$, but under atropine + 2.0 sph. in each eye.

CASE IV.

Wishing to substantiate my theory, and hearing that a motor friend of mine had had a narrow escape from a serious accident, I cross-questioned him about it, without giving him any indication of my purpose, and obtained the following data.

He had been driving most of the day, during the latter part of which he had made one or two slight errors in steering, when suddenly, towards dusk, he crashed into the hedge instead of turning the corner. Luckily for him there was no ditch, and he escaped with a few scratches. Previous to this he had never had any trouble with his eyesight.

I was not surprised to find on examination that he had 1.5 D. hypermetropia.

CASE V.

Whilst discussing the pros and cons of the above cases with a doctor, himself a motorist, he suddenly chimed in with "I wonder if my vision will account for my bad driving of late!"

I found he was slightly astigmatic in each eye, and what is of more consequence, a difference of + 0.75 sph. between the two.

In each of the above cases correcting glasses relieved all symptoms, and up to the present time there has been no recurrence.

Both eye and nerve strain, if at all excessive, are always liable to emphasize an error of vision or a deficiency of muscular tone. This tendency is much increased by approaching dusk, as may be noted in three of the cases.

In conclusion, a word of warning about motor goggles will not be out of place here. Goggles with bowed glasses should never be used under any circumstances, and for this reason—though theoretically they are similar to plain glass, practically they are really myopic glasses of varying strength. Hence they may just turn the scale in favour of spasm of accommodation. Case III had been wearing goggles of this kind. Flat, glazed goggles should be worn, and, if required, they can be replaced by the requisite correcting lenses, care being taken that the existing goggles are properly centred. No smoked goggles should be worn after sundown, as they are liable to create a false dusk and so increase the existing danger.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

EPITHELIOMA OF THE CLITORIS.

LAST month a patient presented herself to me complaining of irritation of the vulva and scalding after micturition, together with pain in the genitals. She also stated that a lump was present. There had been no discharge or haemorrhage. Examination showed a scarlet mass, shaped like a strawberry, protruding between the anterior edges of the nymphae. On palpation it was found to be very tender, and to project from the prepuce of the clitoris.

Subsequently I removed the mass, which was evidently an enlarged glans clitoridis. Histological examination showed it to be a squamous-celled epithelioma, consisting of large branching masses of ingrowing epithelial cells. Large cell nests were present, and keratinoid changes well marked. The patient had noticed nothing until four months ago, and was then troubled with pruritus. She noticed no swelling until two months ago, hence the growth must have been rapid.

The patient's age was 60. She had borne eleven children, and had had one miscarriage. The menopause occurred at 41.

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A CASE OF SPRENGEL'S DEFORMITY.

THIS deformity occurred in a young lady aged 17 years. The faulty position of the scapula was first noticed in infancy.

The right side of the neck is irregular. The superior border and superior angle of the right scapula project above the clavicle into the neck anteriorly, forming quite a marked prominence. The change in the position of the scapula is such that it lies nearly at a right angle to its proper position. The angle of the scapula is fixed, and cannot be brought nearer to or further from the middle line on movement of the arm. The angle appears to be moored to the spine by a band of muscular or ligamentous fibres, corresponding in position to the rhomboideus major. The arm cannot be lifted actively or passively above the horizontal line. When the horizontal position of the arm is reached the right pectoralis major, latissimus dorsi, and rhomboideus major all become tense. On bending forward, the latissimus dorsi is seen crossing the angle of the scapula. There is also secondary scoliosis, most marked in the lumbar region.

The etiology of this condition is obscure. A certain number are associated with other congenital defects, as absence of the radius. Bradford and Lovett say:

The theory of intrauterine pressure and the persistence of a position of the scapula natural to a certain period of fetal life have been urged as the cause of some of the cases.

The treatment recommended in this case was division of the shortened structures passing from the spine to the vertebral border and angle of the scapula.

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